Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Service Rules for Advanced Wireless Services in the 2000-2020 MHz and 2180-2200 MHz Bands	)	WT Docket No. 12-70
	)	
Fixed and Mobile Services in the Mobile Satellite Service Bands at 1525-1559 MHz and 1626.5-1660.5 MHz, 1610-1626.5 MHz and 2483.5-2500 MHz, and 2000-2020 MHz and 2180-2200 MHz	)	ET Docket No. 10-142
	)	
Service Rules for Advanced Wireless Services in the 1915-1920 MHz, 1995-2000 MHz, 2020-2025 MHz, and 2175-2180 MHz Bands	)	WT Docket No. 04-356

COMMENTS OF GLOBALSTAR, INC.

Globalstar, Inc. ("Globalstar") hereby comments on the Federal Communications Commission's ("FCC's" or "Commission's") Notice of Proposed Rulemaking and Notice of Inquiry in the above-captioned proceeding.[1] Globalstar appreciates and supports the Commission's ongoing effort to increase the terrestrial use of mobile satellite service ("MSS") spectrum. As the Commission and numerous other parties have observed, greater terrestrial flexibility in the MSS bands will yield substantial public interest benefits. To ensure that these benefits are fully realized, the Commission should expeditiously adopt new, clearly-defined rules for MSS-terrestrial operations in the 2 GHz band and initiate a similar proceeding to provide relief in the Big LEO band as well.

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[1] *Service Rules for Advanced Wireless Services in the 2000-2020 MHz and 2180-2200 MHz Bands*, Notice of Proposed Rulemaking and Notice of Inquiry, WT Docket No. 12-70 (rel. Mar. 21, 2012) ("*2 GHz NPRM*").

I. Globalstar and Its Services

Since its inception, Globalstar, a leading provider of mobile satellite voice and data services, has invested over $5 billion to develop its global non-geostationary ("NGSO") MSS network. Today, Globalstar uses its global NGSO MSS constellation to provide affordable, high-quality MSS to over 475,000 customers in over 120 countries around the world. In recent years, Globalstar has focused on the development of affordable, consumer-oriented devices and services, most notably offering an innovative MSS device – the SPOT Satellite GPS Messenger™ ("SPOT") – that plays a critical role in the provision of emergency and safety-of-life services to individual consumers beyond terrestrial wireless reach. To date, Globalstar's SPOT products have been used to initiate more than 1800 rescues, in seventy countries and at sea. Indeed, subscribers utilized Globalstar's SPOT products to initiate over 500 rescues during 2011 alone.

Globalstar expects that, by the end of this year, it will become the first global LEO MSS voice and data company to have launched a state-of-the-art, second-generation MSS constellation of satellites. Globalstar has previously launched eighteen satellites of its second-generation MSS constellation over the past year and a half, and six additional satellites are planned for launch during the second half of 2012. Once operational, Globalstar's second-generation MSS network will support highly reliable, crystal-clear CDMA-quality voice and data satellite services to the more than five billion consumers, public safety personnel, and other customers located within our global footprint.

Globalstar's business plan involves the use of its Big LEO spectrum for robust satellite services, but also for terrestrial wireless services. Globalstar plans to enter into partnerships with

terrestrial wireless service providers who will use Big LEO spectrum to provide wireless broadband service to their own retail customers.

II. The FCC Should Expeditiously Adopt Clear Rules for the Terrestrial Use of MSS Spectrum in the 2 GHz Band

Globalstar applauds the Commission's proposal to permit greater terrestrial use of the 2 GHz band. As the Commission staff recognized in the National Broadband Plan, and as Globalstar as well as many others have observed, greater terrestrial flexibility in MSS spectrum is important to developing wireless broadband throughout the United States.[2] More than two years ago, the National Broadband Plan described the extraordinary growth of wireless data traffic,[3] and more recent analyses confirm that wireless data usage will increase rapidly over the next several years. Given consumers' burgeoning demand for mobile e-mail, video, and other applications, global mobile data traffic is approximately doubling each year and will continue to grow at nearly that rate through at least 2016.[4] Within four years, it is expected that approximately 80 percent of total broadband subcriptions globally will be mobile subscriptions.[5]

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2 *See*, *e.g.*, Comments of Globalstar, Inc., IB Docket No. 11-149, at 2-4 (Oct. 17, 2011); Comments of Globalstar, Inc., ET Docket No. 10-142, at 20-30 (Sep. 15, 2010); FCC, *Connecting America: The National Broadband Plan*, at 87-88 (rel. March 16, 2010), *available at*: <http://download.broadband.gov/plan/national-broadband-plan.pdf> ("National Broadband Plan").

3 National Broadband Plan at 76-77.

4 *See Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update, 2011-2016*, at 7 (Feb. 14, 2012), *available at*: <http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white_paper_c11-520862.pdf>. According to the Cisco study, global mobile data traffic overall will increase 18-fold between 2011 and 2016. Mobile data traffic will grow at a compound annual growth rate of 78 percent from 2011 to 2016, reaching 10.8 exabytes per month by 2016. *Id*. at 3.

5 *See* Darrell M. West, Brookings Institution, *Ten Facts About Mobile Broadband*, at 2 (Dec. 8, 2011), *available at*: <http://www.brookings.edu/~/media/research/files/papers/2011/12/08%20mobile%20broadband%20west/1208_mobile_broadband_west.pdf> (citing Wireless Intelligence, July 2011; Informa Telecoms & Media (WBIS), July 2011). By 2015, it is expected

As the Commission describes in the *2 GHz NPRM*, this wireless broadband growth is creating an urgent need for additional mobile broadband-capable spectrum in the United States.[6] In a February 2012 study, the Council of Economic Advisors found that the current allocation of terrestrial wireless spectrum simply cannot accommodate the projected acceleration in mobile broadband demand, even with improvements in technology and substantial investment in new wireless facilities.[7] In response to this imminent spectrum gap, the 2010 National Broadband Plan called for an additional 500 MHz of new spectrum to be made available within the following ten years, including an additional 300 MHz of spectrum suitable for flexible mobile within the following five years.[8] The Commission's efforts since then to free up additional spectrum in the Wireless Communications Services ("WCS") band, the AWS-2 bands, the television broadcast band, and federal government bands have proceeded slower than many hoped, and these bands are unlikely to offer significant spectrum to the nation's broadband "spectrum inventory" for several years. In contrast, spectrum in the MSS bands, including Globalstar's nearly 20 megahertz allotment of terrestrial use Big LEO spectrum, can very quickly be added to the nation's broadband spectrum supply. Accordingly, the FCC can and

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that there will be 3.1 billion mobile broadband subscribers, compared to 848 million fixed broadband subscribers. *Id*.

6 *2 GHz NPRM* ¶¶ 10-12.

7 *Id*. ¶ 10 (citing Council of Economic Advisors, *The Economic Benefits of New Spectrum for Wireless Broadband*, at 5 (Feb. 2012), *available at*: <http://www.whitehouse.gov/sites/default/files/cea_spectrum_report_2-21-2012.pdf>).

8 National Broadband Plan at 84. According to a recent study from Recon Analytics, if the U.S. government realizes its goal of making an additional 500 megahertz of spectrum available for wireless broadband service, that achievement could add $166 billion to the U.S. gross domestic product and help create 350,000 new jobs. *See* Roger Entner, Recon Analytics LLC, *The Wireless Industry: The Essential Engine of U.S. Economic Growth*, at 5 (May 2012), *available at*: <http://reconanalytics.com/wp-content/uploads/2012/04/Wireless-The-Ubiquitous-Engine-by-Recon-Analytics-1.pdf>.

should help alleviate the impending spectrum crunch by increasing MSS-terrestrial flexibility as expeditiously as possible.

Greater terrestrial use of MSS spectrum can also help sustain the development of satellite services in the United States and around the world. Terrestrial operations can generate the near-term revenues and investment necessary to fund the substantial costs of providing mission-critical satellite services, thereby ensuring MSS operators' commercial viability. Enhancing the sustainability of MSS would particularly benefit consumers and public safety personnel in remote, unserved, and underserved areas in the United States and elsewhere that are beyond the reach of terrestrial networks but within MSS operators' service footprints.

To maximize these public interest benefits, Globalstar urges the Commission to move quickly to adopt clear, well-defined rules for terrestrial use of MSS spectrum. A clear, stable framework will provide the regulatory certainty needed to encourage MSS-terrestrial partnerships, promote substantial investment in terrestrial deployment, and stimulate rapid growth of mobile broadband in the MSS bands. Accordingly, the FCC should issue an order in the 2 GHz proceeding promptly and launch expeditiously an NPRM on terrestrial use of Big LEO spectrum.

III. Globalstar Supports Basic Elements of the FCC's AWS-4 Proposal

In the *2 GHz NPRM*, the Commission proposes a new "AWS-4" band and new rules for terrestrial use of MSS spectrum in the 2 GHz band. Globalstar supports a number of the basic elements of this proposal and urges the Commission to incorporate similar elements in its future Big LEO MSS-terrestrial rulemaking.

First, Globalstar agrees with the Commission's tentative decision to modify DISH's MSS license to include terrestrial AWS-4 authorizations, rather than assigning "initial" AWS-4

licenses.[9] As the FCC found ten years ago in its original MSS ancillary terrestrial component ("ATC") proceeding and tentatively concludes in the *2 GHz NPRM*, spectrum sharing between separately-licensed MSS and terrestrial operators is not viable.[10] Under real-world conditions, complex, dynamic frequency coordination cannot be achieved between separately-controlled MSS and terrestrial networks. Globalstar also agrees with the Commission's tentative decisions to eliminate the ATC gating requirements[11] and apply flexible Part 27-type rules to terrestrial operations in the 2 GHz band.[12] This more flexible approach will promote the development of terrestrial mobile broadband in 2 GHz spectrum.

Globalstar also supports terrestrial wireless build-out obligations for the 2 GHz band, as a means of ensuring the full, efficient use of this spectrum. Terrestrial build-out requirements in MSS spectrum should be tailored to the unique circumstances of the band at issue, should be achievable, and should reasonably accommodate a range of business plans, including both a new entrant's build-out of a competitive network and an MSS licensee's leasing of spectrum to existing wireless operators.[13] Similarly, the FCC should tailor any penalties for non-compliance with such build-out obligations to the specific circumstances of the MSS band in question.[14]

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9 *2 GHz NPRM* ¶¶ 69-71.

10 *Id.* ¶¶ 69, 71; *Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, the L-Band, and the 1.6/2.4 GHz Bands*, Report and Order and Notice of Proposed Rulemaking, 18 FCC Rcd 1962, ¶ 52 (2003). Globalstar also agrees with the Commission that a separate terrestrial licensee's wireless operations could not be coordinated with an MSS licensee's ATC systems. *2 GHz NPRM* ¶ 71.

11 *2 GHz NPRM* ¶ 136.

12 *Id.* ¶¶ 28-29.

13 The Commission's proposed interim and final build-out requirements for AWS-4 appear challenging for any licensee to meet, no matter the business plan. *See id.* ¶ 92.

14 *Id.* ¶¶ 94-95.

Penalties should not be so severe that they would *discourage* rather than stimulate investment in terrestrial wireless broadband facilities in MSS spectrum.

IV. Conclusion

To realize the full public interest benefits of MSS spectrum, the Commission should expeditiously adopt new, clearly-defined rules for terrestrial operations in MSS frequencies in the 2 GHz band and immediately thereafter in the Big LEO band. These MSS-terrestrial rules and policies should be tailored to the specific circumstances of each band, while incorporating the basic elements identified in these Comments.

Respectfully submitted,

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May 17, 2012